

REMARKS

1. In response to the Office Action mailed May 6, 2004, Applicant respectfully requests reconsideration. Claims 1 and 3-17 were last presented for examination. All the claims were rejected in the outstanding Office Action. By the foregoing amendments, claims 1, 3, 4, 5, 11, 12 and 15 have been amended. No claims have been added or canceled. Thus, upon entry of this paper, claims 1 and 3-17 will remain pending in this application. Of these sixteen claims, two (2) claims (claims 1 and 12) are independent. Based on the above Amendments and following Remarks, Applicant respectfully requests that the outstanding objections and rejections be reconsidered, and that they be withdrawn. Further, Applicant notes that these Amendments do not narrow the scope of the claims in any way.

Art of Record

2. Applicant acknowledges receipt of form PTO-892 listing additional references identified by the Examiner.

Examiner Interview

3. Applicant thanks the Examiner for the interview conducted on July 26, 2004. In the interview, the Examiner and undersigned discussed certain claim objections and rejections under 35 USC 112, second paragraph. The Examiner also indicated that much of these objections and rejections originated with his primary examiner and, as such, he will need to discuss the substance of this interview with his primary examiner prior to formally agreeing with the proposed amendments discussed during the interview and set forth herein.

4. In particular, the Examiner and undersigned discussed the term "inaccessible." On page 5 of the Office Action, the Examiner asserts that the Examiner treats the claim language "inaccessible to subsequently-applied coatings" as "intended use" for subsequently-applied coating. The undersigned explained in the interview that such an interpretation is incorrect and in contradiction to the dictionary definition as well as the definition of the subject term in the application.

6. It is well settled that terms of a claim are to be given their ordinary meaning unless defined in the specification. “The PTO [is to] appl[y] to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). The USPTO has provided instructions consistent with the caselaw: “The words of a claim must be given their plain meaning unless applicant has provided a clear definition in the specification. It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language.” (*See*, MPEP §2111.01, citing *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)).

7. The plain meaning; that is, the dictionary definition of the term “inaccessible” is “not accessible.” (*See*, Merriam Webster’s Collegiate Dictionary). This definition is consistent with the definition and use of the term throughout Applicant’s specification. The claimed filler material is described as being applied to the printed circuit board to prevent the subsequently-applied dielectric coating from entering – that is, accessing – the spaces between the components and/or printed wiring board. (*See*, for example, Applicant’s application, pgs. 31-33.) Therefore, the term “inaccessible” does not mean “intended use” as suggested by the Examiner. Rather, spaces in the printed circuit board are “not accessible” to subsequently-applied coatings due to the presence of the filler material.

Claim Objections

8. The Examiner has objected to claims 1, 5 and 12 for including various informalities. With regard to claim 1, the Examiner states that the claim recitation “the printed [circuit] board has a cavity with one or more openings to the surface of the printed [circuit] board” is not understood. Applicant disagreed with the Examiner, explaining in the noted interview that the subject recitations are clearly defined in the Applicant’s specification. However, to advance prosecution, Applicant has amended the claims as discussed in the noted interview. The Examiner agreed that such amendments overcome this objection to the claims.

9. Applicant has amended claims 5 and 12 in accordance with the Examiner's suggestion. Accordingly, Applicant request that the objections to these claims be withdrawn.

Claim Rejections Under 35 USC §112, second paragraph

10. Independent claim 12 and dependent claims 3 and 13-17 have been rejected under 35 U.S.C §112 as being indefinite.

11. Claims 3 and 12 have been amended as agreed in the noted interview to overcome the rejections of claim 3 and 12.

12. Claims 13-17 were not discussed in the detailed action and, therefore, are believed to have been rejected for depending directly or indirectly from rejected claim 12.

Applicant asserts that claim 12 as amended, and claims 13-17 are patentable over the art of record.

Claim Rejections Under 35 USC §102

13. Independent claims 1, 3-5, 7, 11-12 and 14-15 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,127,038 to McCullough, *et al.* (hereinafter, "McCullough"). In addition, dependent claims 6, 8-10, 13 and 17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over McCullough in view of Japanese Patent No. 200034457A to Kotani, *et al.* (hereinafter, "Kotani"). Dependent claim 16 has been rejected under 35 U.S.C. §103(a) as being unpatentable over McCullough in view of U.S. Patent No. 5,639,989 to Higgins, III. (hereinafter, "Higgins"). Based upon the following Amendments and Remarks, Applicant respectfully requests reconsideration and withdrawal of these rejections.

14. The Examiner asserts that the first coating layer 14 of McCullough is disposed in a cavity on the printed circuit board and on surfaces of the printed circuit board immediately surrounding the cavity so as to bridge across the one or more cavity openings and to at least partially infill the cavity wherein the cavity is substantially inaccessible to subsequently-applied coatings. The Examiner refers Applicant to column 3, lines 8 and 52-64 of McCullough in support of this interpretation. Independent claim 12 was rejected

for similar reasons. (*See*, Office Action, pg. 4.) Applicant respectfully traverses these rejections.

15. McCullough teaches a coating consisting of two layers 14, 16 which are separately applied to all surfaces of the printed circuit board, including surfaces that define the walls of cavities on the printed circuit board. A fair reading of McCullough shows that McCullough fails to support the Examiner's interpretation of McCullough's first coating layer 14. Nowhere does McCullough disclose, teach or suggest that first coating layer 14 bridges across cavity openings as recited in Applicant's independent claims 1 and 12. Rather, McCullough's first coating layer 14 is deposited on most if not all printed circuit board surfaces potentially exposed to air, moisture or water. McCullough expressly states that such surfaces include surfaces 20 of the board, surfaces 22 of components and surfaces 24 of component leads. Thus, McCullough's first coating layer 14 coats all surfaces including those that define spaces in the printed circuit board. For at least these reasons, Applicant respectfully asserts that the rejections based on McCullough are improper and should be withdrawn.

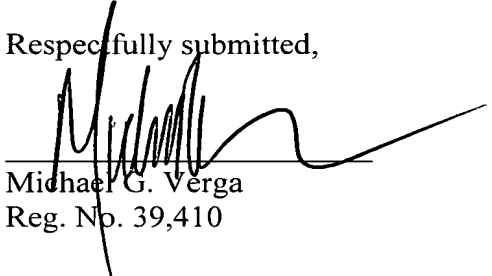
16. Furthermore, if McCullough's first coating layer 14 bridged across openings into spaces to encapsulate and seal the spaces (as recited in Applicant's amended independent claim 12), or otherwise rendered such spaces substantially inaccessible to subsequently-applied coatings, (as recited in Applicant's amended independent claim 1), first coating layer 14 would prevent McCullough's second coating layer 16 from being deposited on the first coating layer 14, directly contradicting the teachings of McCullough. Specifically, if McCullough's first coating layer 14 prevented McCullough's second coating layer 16 from coating the surfaces to which first coating layer 14 was previously applied, then McCullough could not contain a "second coating layer 16 that is deposited onto the first coating layer 14, thereby providing a continuous, conformal, stratified coating 14, 16 which is sealed and corrosion resistant over the surface of the board, components and respective leads". (*See*, McCullough, col. 3, lns. 8-19; emphasis added.) That is, were McCullough's first coating layer 14 to function as alleged by the Examiner, McCullough would fail to achieve its purpose of providing a conformal coating comprised of two coating layers 14, 16 applied to all exposed surfaces on the printed circuit board including surfaces of the components and leads, including between and behind lead surfaces. (*See*, McCullough, col. 2, lns. 19-31; col. 3, lns. 8-11; lns. 61-64; emphasis added.) Thus,

McCullough's first coating layer 14 does not, and in fact must not, bridge across openings on the surface of the printed circuit board so to encapsulate and seal the spaces (as recited in Applicant's claim 12), nor render the spaces substantially inaccessible to subsequently-applied coating (as recited in Applicant's claim 1). For at least these reasons, the rejection of claims 1 and 12 based on McCullough are improper and should be withdrawn.

Conclusion

17. In view of the foregoing, this application should be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after entering this paper into the record, that an interview will facilitate prosecution of this application, the Examiner is requested to call the Applicant's representative at the number provided below.

Respectfully submitted,



Michael G. Verga
Reg. No. 39,410

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